

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : KEVIN H. GILLESPIE  
Serial No. : 09/788,147  
Filed : February 16, 2001  
Title : SHOE OUTSOLE

Art Unit : 3728  
Examiner : Marie D. Patterson

#22  
Buy  
C. L. L. L.  
2/3/04

**Mail Stop Appeal Brief - Patents**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Appellants are appealing the final rejection of claims 1-15, 17-23, and 26-29 dated May 28, 2003. A Notice of Appeal was filed on October 22, 2003.

**(1) Real Party in Interest**

The real party in interest is SRL, Inc.

**(2) Related Appeals and Interferences**

There are no pending related appeals or interferences.

**(3) Status of Claims**

Claims 1-15, 17-23, and 26-29 are pending.

Claims 16, 24, and 25 have been cancelled.

Claims 1-15, 17-23, and 26-29 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Claims 1-6, 8, 11, 13-15, 17, 22, 23, and 26 have been rejected under 35 U.S.C. §102(b) as being anticipated by Schenkel (Brazil publication, PI 9800597-9).

RECEIVED  
JAN 22 2004  
TECHNOLOGY CENTER R3700

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

01/21/2004 MDANTE1 00000090 09788147

01 FC:1402

330.00 OP

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

January 15, 2004  
Date of Deposit

Roselynn Scarfo  
Signature

ROSBLYNN SCARFO  
Typed or Printed Name of Person Signing Certificate

Claims 1, 4-6, 11, 12, 15, 17, and 26 have been rejected under 35 U.S.C. §102(b) as being anticipated by Fuerst (U.S. Pat. No. 4,897,936).

Claims 1-4, 11, 15 and 26 have been rejected under 35 USC §103(a) as being obvious over Preston (U.S. Pat. No. 5,287,638) in view of Fuerst.

Claims 1 and 5-9 have been rejected under 35 USC §103(a) as being obvious over Duclos (U.S. Pat. No. 4,724,624) in view of Fuerst.

Claims 1 and 10 have been rejected under 35 USC §103(a) as being obvious over Parisotto (U.S. Pat. No. 5,768,806) in view of Fuerst.

Claims 1, 5, 6, 11 and 13-15 have been rejected under 35 USC §103(a) as being obvious over Dyer et al. (U.S. Pat. No. 5,325,611) in view of Fuerst.

Claims 1, 3, 4, 12, 15, 17-23 and 27-29 have been rejected under 35 USC §103(a) as being obvious over Pavone (U.S. Pat. No. 6,009,637) in view of Fuerst.

#### **(4) Status of Amendments**

In the Advisory Action of September 9, 2003, the Examiner noted that the amendments filed by Applicant on August 28, 2003 would be entered for purposes of appeal. All other amendments have been entered.

#### **(5) Summary of Invention**

The invention relates to a toddler shoe having an improved cushioning system at the heel. Each of Applicant's independent claims features an outsole having an upper surface, an opposite lower surface, and a heel section. The upper surface is positioned relatively closer to a wearer's foot and the lower surface is positioned to engage upon the floor or ground when the shoe is worn during walking. The outsole defines an aperture in the heel section extending from the upper surface to the opposite lower surface. A cushion is disposed in the aperture of the outsole. The cushion deforms and flows toward the floor or ground surface upon application of the wearer's weight and the force of heel strike. A recessed wall extends upwards from the lower surface toward the upper surface. The recessed wall defines a recessed region that is in communication, at its upper reaches, with the aperture in the heel section. The recessed wall spaces the cushion, *at all times*, from contact with the floor or ground surface.

As recited in claim 22, in some embodiments the outsole includes first and second cushions. A sidewall having a cut-out portion is further included. The first cushion is adapted, under the wearer's weight and force of heel strike, to deform and flow toward the floor or ground surface. The second cushion is adapted, under the wearer's weight and force of heel strike, to deform outwardly at the cut-out portion in the sidewall.

As recited in claim 26, in some embodiments the cushion includes a polymeric, gelatinous material.

Applicant's shoe having the improved cushioning system at the heel advantageously mimics a toddler's natural walking motion. A further advantage of Applicant's shoe is that it enhances flexibility and comfort for the wearer.

**(6) Issues**

- (A) Are claims 1-15, 17-23, and 26-29 indefinite under 35 U.S.C. §112?
- (B) Are claims 1-6, 8, 11, 13-15, 17, 22, 23, and 26 anticipated under 35 U.S.C. §102 by Schenkel?
- (C) Are claims 1, 4-6, 11, 12, 15, 17, and 26 anticipated under 35 U.S.C. §102 by Fuerst?
- (D) Is the subject matter of claims 1-15, 17-23, and 26-29 obvious under 35 USC §103 over either Preston, Duclos, Parisotto, Dyer et al., or Pavone in view of Fuerst?

**(7) Grouping of Claims**

- With respect to issue (A), claims 1-15, 17-23, and 26-29 stand or fall together.
- With respect to issue (B), claims 1-6, 8, 11, 13-15, and 17 stand or fall together. Claims 22 and 23 stand or fall together. Claim 26 stands or falls alone.
- With respect to issue (C), claims 1, 4-6, 11, 12, 15, and 17 stand or fall together. Claim 26 stands or falls alone.
- With respect to issue (D) claims 1-15 and 17-21 stand or fall together. Claims 22 and 23 stand or fall together. Claims 26-29 stand or fall together.

**(8) Argument**

Applicants will explain why the rejections should be reversed.

**A. Claims 1-15,17-23 and 26-29 are not indefinite**

Claims 1-15,17-23 and 26-29 have been rejected as being indefinite. The Examiner asserts that the phrase "said aperture, said lower cushion surface of said first cushion, exposed at the aperture" is awkward, confusing and vague. Applicant respectfully submits that the Examiner is taking these words out of context. The entire phrase, of which these words are merely a part, reads as follows:

the outsole further comprising a recessed wall surface extending generally upwards from the lower surface toward the upper surface and defining a recessed region in communication, at its upper reaches, with said aperture, said lower cushion surface of said first cushion, exposed at the aperture within said recessed region, being spaced by said recessed wall surface of said outsole above the floor or ground surface at all times, including when said first cushion deforms and flows under the wearer's weight and force of heel strike.

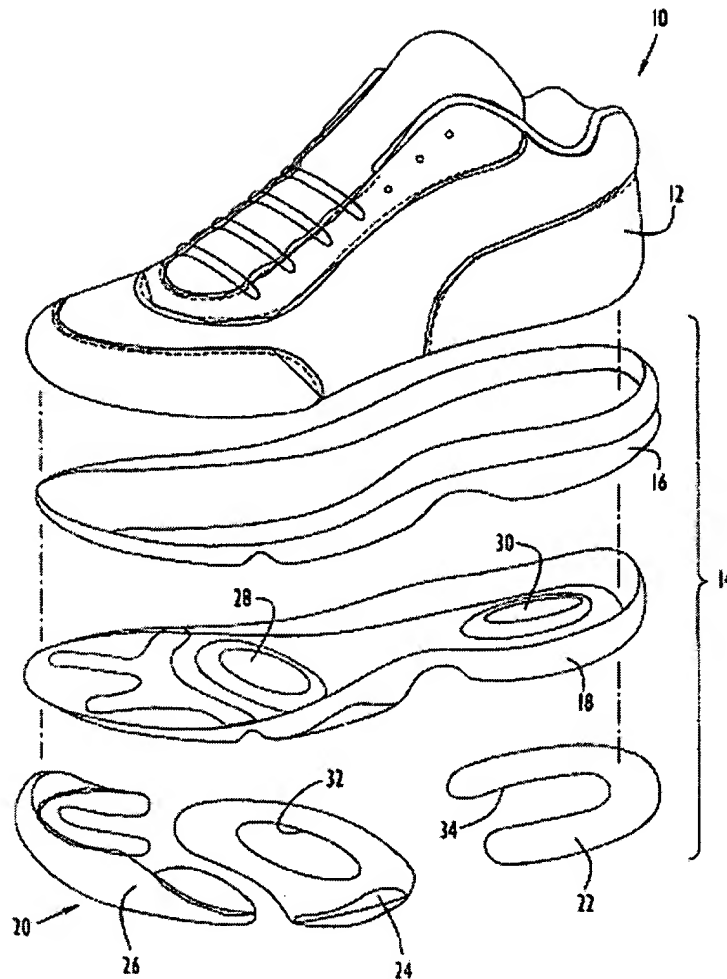
While the words cited by the Examiner may sound awkward or confusing when taken out of context, Applicant respectfully submits that, when considered in context they are perfectly clear and definite. Accordingly, Applicant respectfully requests that these rejections be reversed.

**B. Claims 1-6, 8, 11, 13-15, 17, 22, 23 and 26 are not anticipated by Schenkel**

Claims 1-6, 8, 11, 13-15, 17, 22, 23 and 26 have been rejected as being anticipated by Schenkel.

Applicant's claims require an aperture in the heel section extending from the upper surface to the opposite lower surface, and a resilient, deformable first cushion disposed in said aperture. The first cushion is "adapted to deform and flow toward the floor or ground surface under the wearer's weight and force of heel strike." Schenkel does not teach or fairly suggest such a cushion.

The reference numerals referred to with respect to Schenkel are found in U.S. Pat. No. 6,418,641 issued to Schenkel ("Schenkel II). Fig. 1 of Schenkel II has been reproduced below as Fig. 1.



**Fig. 1**

As shown in Fig. 1, Schenkel teaches a shoe including a frame 18 defining an aperture 30, and an insole 16 positioned above the frame 18. There is no teaching or suggestion by Schenkel that the insole 16 is “adapted to *deform and flow* toward the ground or floor surface under the wearer’s weight and force or heel strike” as required by Applicant’s claims. While the insole 16 does “protrude or bulge in a generally downward direction through cutouts 28 and 30” (Schenkel II, col. 3, lines 11-12), there is no suggestion that the material of the insole “flows.” Nor is there any reason to expect that the materials described by Schenkel would inherently flow.

Notwithstanding, the Examiner asserts that Schenkel's cushion (E), which corresponds to the insole 16 of Schenkel II, does in fact "flow." This assertion, in turn, is based on the Examiner's selection of a definition of the word flow: "to deform under stress without cracking or rupturing." Applicant notes that this definition is listed seventh out of eight possible definitions of the word "flow" in Webster's Dictionary, and is said to be "used especially of minerals and rocks." The Examiner's selection of this definition from the many alternative, and more frequently used, meanings is improper. This use of the term "flow" is clearly inconsistent with the manner in which this term is used in Applicant's specification, to refer to soft gelatinous materials. A more appropriate definition is definition 1(b): "to move with a continual change of place among the constituent particles," *the molasses flowed smoothly*." When the term "flow" is defined appropriately in light of Applicant's specification and its common meaning, it is clear that the Schenkel insole cannot fairly be said to flow.

The Examiner further contends, "The fact that the definition of flow used by the examiner is only one of the definitions does not overcome the fact that the definition is a definition of the term." (Advisory Action mailed 9/10/2003, p. 2). However, as discussed above, the definition arbitrarily selected by the Examiner is clearly not the meaning that Applicant intended. Nor is this the meaning that the artisan would have assigned to the term "flow" read in the context of Applicant's specification. It is axiomatic that the words of a claim must be given their plain meaning. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). In other words, they must be read as they would be interpreted by those of ordinary skill in the art. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001). A person of ordinary skill in this art would not interpret the term "flow" to have the meaning set forth by the Examiner, which is typically used in the context of minerals and rocks.

Consequently, Schenkel does not anticipate Applicant's claims. Applicant, therefore, respectfully requests that this rejection be withdrawn.

Furthermore, with regard to Applicant's claim 22 there is no teaching or suggestion in Schenkel of a cushion shaped to deform outwardly at a cutout portion in a sidewall along the heel section. The Examiner seems to equate cutouts VD, VT of Schenkel, which correspond to cutouts 28, 30, respectively, in Fig. 1 above, with Applicant's sidewall cutout. However, cutouts 28, 30 are clearly not in a sidewall of Schenkel's shoe. In fact, Schenkel does not even suggest

the possibility of including a cutout in the sidewall. For this reason, in addition to the reasons detailed above, Applicant requests that the rejection of claim 22 be withdrawn.

Finally, Schenkel fails to disclose a cushion comprising a polymeric, gelatinous material as recited in Applicant's claim 26. As discussed above, Schenkel discloses an insole 16 that protrudes or bulges in a generally downward direction through cutouts 28 and 30. The insole 16 is described as being manufactured from ethyl vinyl acetate and polyurethane. (Schenkel II, col. 4, lines 19-23). There is no indication that Schenkel contemplated providing these materials in a gelatinous form. For this reason, in addition to those reasons noted above, Applicant requests that the rejection of claim 26 be withdrawn.

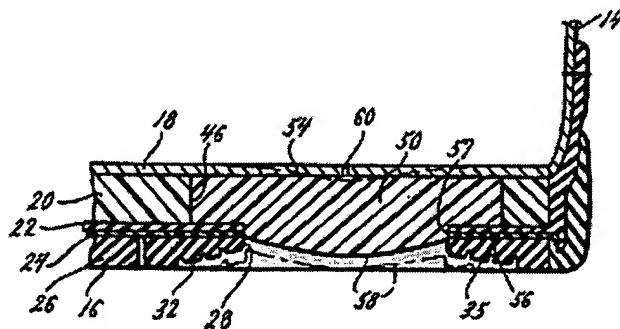
**C. Claims 1,4-6, 11, 12, 15, 17 and 26 are not anticipated by Fuerst**

Claims 1,4-6, 11, 12, 15, 17 and 26 have been rejected as being anticipated by Fuerst.

Applicant's claims require spacing, *at all times*, between the cushion and the floor or ground surface.

Fuerst describes a sole construction for an athletic shoe having a dome-shaped portion designed to contact the floor surface during play. At col. 3, lines 24-29, Fuerst explains:

The dome-shaped portion 58 has a height less than the thickness of the outer sole and does not engage the floor or ground *until sufficient weight is applied to it by the weight of the player, at which time it will assume the configuration shown in phantom outline in FIG. 5* [reproduced below as Fig 2]. (emphasis added).



**Fig. 2**

The Examiner contends that, because Fuerst states that the central portion is "not ground engaging in normal play," the shoe disclosed by Fuerst meets Applicant's claim language. Applicant respectfully disagrees.

As acknowledged by the Examiner, the central portion in the Fuerst shoe "*engages the ground under appropriate player weight distribution conditions.*" (Fuerst, col. 1, line 67 - col. 2, line 2). Thus, the Fuerst shoe is designed with the intention that the central portion *will* engage the ground when the shoe is in use. How frequently or infrequently this occurs, or under what weight distribution conditions, is not relevant to the patentability of Applicant's claims.

As noted above, Applicant's claims require spacing, at all times, between the cushion and the floor or ground surface. Because Fuerst's cushion or central portion is clearly designed to make contact with the floor or ground surface, Fuerst cannot anticipate Applicant's claims.

The Examiner contends that Applicant's claimed feature requiring spacing between the cushion and the floor or ground surface is merely an intended use recitation. More specifically the Examiner states that "the functional recitation of 'said lower cushion surface...being spaced...at all times' is considered an intended use recitation and encompassed by the use of walking which is discussed by Fuerst." Applicant disagrees. The language pointed out by the Examiner is not merely a statement of intended use. The language to which the Examiner refers reads in full as follows:

said lower cushion surface of said first cushion, exposed at the aperture within said recessed region, being *spaced by said recessed wall surface of said outsole* above the floor or ground surface at all times, including when said first cushion deforms and flows under the wearer's weight and force of heel strike (emphasis added).

Without question, this clause includes structural limitations (e.g., "spaced by said recessed wall surface of said outsole") that cannot simply be ignored by the Examiner. If these limitations are given patentable weight – as they must be – the Examiner's rejection is baseless and Applicant's claims are clearly not anticipated. For example, Fuerst lacks the claimed recessed wall surface, which spaces the lower cushion surface above the floor or ground surface at all times. Instead, Fuerst expressly states that the lower face 35 of his ribbed ring 32 flattens out when weight is applied to the sole, allowing the dome-shaped portion to contact the ground, as indicated by the



phantom lines in Fig. 2 above. The flattening of the lower face 35, and contact of the dome-shaped surface with the floor, "provides a superior cushioning effect at these two locations in particular, without resulting in excessive wear of the skin of the polyurethane insert lower surface." (See, e.g., col. 3, lines 24-34.)

The Examiner additionally claims that Applicant's spacing feature is inherently possessed by Fuerst. The Examiner remarks that "it is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim to distinguish over the prior art." But, while this statement of the law is correct, this statement does not apply to the present facts. The "newly discovered function" recited by Applicant, i.e., that the lower cushion surface is maintained spaced above the floor or ground *at all times*, was not inherently possessed by the Fuerst shoe. As discussed above, Fuerst states repeatedly, in no uncertain terms, that his shoe is designed specifically so that the dome-shaped portion *will* contact the floor or ground.

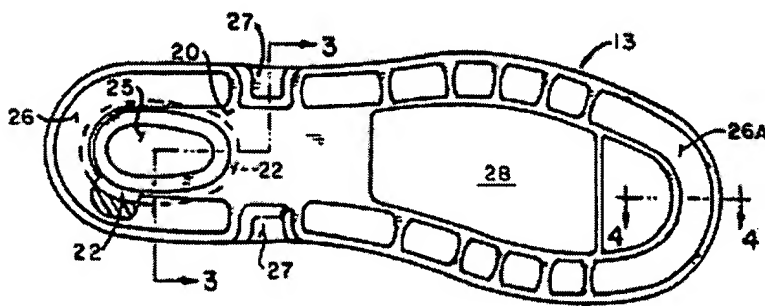
Finally, the Examiner asserts that "the structure of Fuerst is clearly capable of performing the function 'said lower cushion surface of said first cushion...being spaced by...at all times' especially when the wearer is low weight, participates in low force activities, etc." Applicant disagrees. There is simply no indication that the Fuerst shoe would perform in this manner, and therefore, the Examiner's assertion is based solely on unsupported conjecture.

In summary, unlike Fuerst's shoe, Applicant's shoe is designed so that the cushion will *never* contact the floor or ground when the shoe is in use, and includes structure that achieves this result. As detailed above, not only does Fuerst not teach or fairly suggest Applicant's claimed structure, Fuerst expressly teaches away from it. Therefore, Applicant respectfully requests that the Board reverse this rejection.

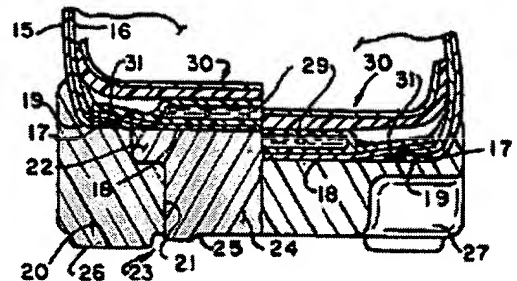
In addition, Fuerst fails to disclose a cushion comprising a polymeric, gelatinous material as required by Applicant's claim 26. Fuerst's inserts are made of thermoset polyurethane foam. (Fuerst, col. 3, lines 5-10). Thermoset polyurethane foam cannot fairly be considered a polymeric, gelatinous material. For this reason, in addition to those reasons discussed above, Applicant respectfully requests that the rejection of claim 26 be withdrawn.

**D. The subject matter of claims 1-15, 17-23, and 26-29  
is not obvious under 35 USC §103 over either Preston,  
Duclos, Parisotto, Dyer et al., or Pavone in view of Fuerst**

Claims 1-4, 11, 15 and 26 have been rejected as being obvious over Preston in view of Fuerst. Figs. 2 and 3 of Preston have been reproduced below as Figs. 3 and 4, respectively. Fig. 3 is a plan view of the outsole of Preston's shoe. Fig. 4 is a transverse stepped sectional view of the structural features seen along line 3—3 in Fig. 3.



**Fig. 3**



**Fig. 4**

Referring to Fig. 4, in Preston a plug-type shock absorber body 23 is cemented in place within an aperture 21 in a heel area 20 of the outsole. The shock absorber body 23 has an extension 24 which passes completely through the aperture 21 to present an exterior surface 25 that lies substantially flush in the outsole tread surface. (Preston, col. 2, lines 34-37). As highlighted in Fig. 4, a pad 26 is slightly higher in relation to the shock absorber surface 25, so that the pad 26 provides a strike area that contacts the walking surface first. Then, as body weight is applied, the cushion or extension 24 of the plug body 23 makes a secondary contact of its surface 25 with the floor or ground surface to absorb the energy that would normally be applied only to the pad 26. (Preston, col. 2, lines 41-48).

There is no teaching or suggestion in the shoe of Preston for a cushion, disposed in an aperture of the outsole, that deforms to flow toward the floor or ground surface when pressure is applied, with the cushion *remaining in a recessed region of the outsole, spaced from contact with the floor or ground surface at all times*. In fact, as noted above, the cushion or plug body of

Preston's shoe is specifically designed to make contact with the floor or ground surface in order to absorb energy. This is precisely what Applicant's shoe is designed to prevent.

The Examiner contends that Preston "shows a shoe with an aperture 21 and a cushion 24 in the heel of an outsole and a recess in the lower surface of the outsole substantially as claimed by Applicant except for the exact depth of the recess in the lower surface of the outsole." While Applicant does not concede that this is the case, even if it is, the difference in depth is an important structural difference which cannot simply be disregarded when evaluating the patentability of Applicant's claims.

As discussed above, there is also no teaching or suggestion in Fuerst of a cushion, disposed in an aperture of the outsole, that deforms to flow toward the floor or ground surface when pressure is applied, with the cushion *remaining in a recessed region of the outsole, spaced from contact with the floor or ground surface at all times*. In fact, as detailed above, Fuerst teaches expressly away from such a feature.

Even if these references may be properly combined in the manner proposed by the Examiner, which Applicant does not concede, neither Fuerst nor Preston, taken alone or in combination, teaches or suggests Applicant's claimed shoe having a cushion that remains spaced from contact with the ground or floor surface at all times.

Furthermore, Preston fails to teach or suggest a cushion comprising a polymeric, gelatinous material as required by Applicant's claim 26. In fact, Preston completely fails to disclose a material from which the cushion or plug body may be constructed. For this reason, in addition to those reasons discussed above, Applicant respectfully request that the rejection of claim 26 be withdrawn.

Claims 1 and 5-9 have been rejected as being obvious over Duclos in view of Fuerst. Duclos is cited by the Examiner for its description of a shoe with an outsole having a grid and loop pattern. Duclos does not teach those features of Applicant's invention found lacking in Fuerst.

Claims 1 and 10 have been rejected as being obvious over Parisotto in view of Fuerst. Parisotto is cited by the Examiner for its description of a shoe with a grid pattern in a top surface of the outsole. Parisotto does not teach those features of Applicant's invention found lacking in Fuerst.

Claims 1, 5, 6, 11 and 13-15 have been rejected as being obvious over Dyer et al. in view of Fuerst. Dyer et al. is cited by the Examiner for its description of footwear with a "comfort cradle" in a midsole region. Dyer et al. includes a socket 11 and a cradle device 26 that fits into the socket to provide cushioning, stability, and self centering. There is indication that the cradle device 26 is spaced from contact with the floor or ground surface at all times. Nor is there any indication that the cradle device 26 *flows* toward the floor or ground surface upon application of the wearer's weight and the force of heel strike. In short, Dyer et al. does not teach those features of Applicant's invention found lacking in Fuerst.

Finally, claims 1, 3, 4, 12, 15, 17-23, and 27-29 have been rejected as being obvious over Pavone in view of Fuerst. Figs. 3 and 4 of Pavone have been reproduced below as Figs. 5 and 6. Referring particularly to Fig 6, Pavone discloses a shoe having helium modules 30, 31, 32 held permanently in place, spaced from floor contact by hard rubber support members 33, 34, 35, 36, 37. Spaces 38, 39, 40, 41, 42, 43, 44, 45, 46 are included between support members 33, 34, 35, 36, 37. Cushioning is provided by movement of helium transversely through spaces 38, 39, 40, 41, 42, 43, 44, 45, 46 between modules 30, 31, 32 when a module is compressed. There is no teaching or suggestion of flow of a cushioning material toward a floor or ground surface under the wearer's weight and force of heel strike, as recited in Applicant's claims.

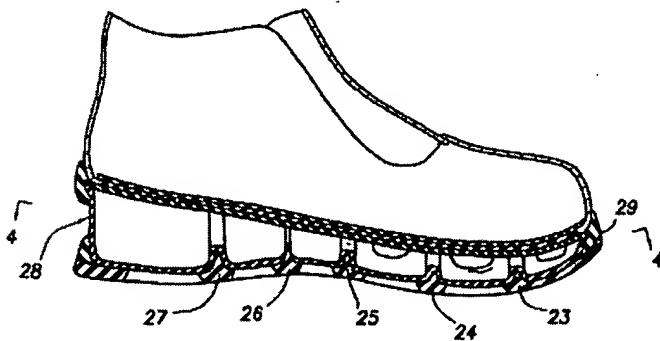


Fig. 5

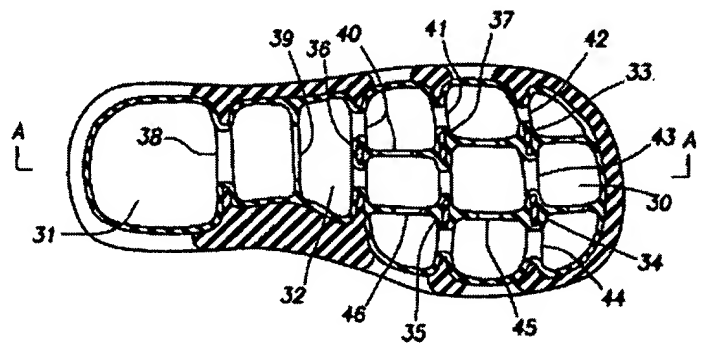


Fig. 6

The Examiner asserts, however, that "the silicone bladder structure of Pavone would inherently flow/bulge through the openings/apertures to some degree." There is no apparent factual basis for this assertion in the Pavone reference. Instead, this rejection appears to be based

solely on speculation by the Examiner. As the court pointed out in *In re Newell*, "it is well established that, in deciding that a novel combination would have been obvious, there must be some supporting teaching in the prior art. 'That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown.'" *In re Newell*, 891 F.2d 899, 901 (CAFC 1989). Consequently, Pavone cannot be considered to teach or suggest a flow of cushioning material toward a floor or ground surface under the wearer's weight and force of heel strike.

Thus, Pavone lacks any teaching or suggestion of the features of Applicant's invention found lacking in Fuerst. Therefore, even if these references could be combined in the manner proposed by the Examiner, which Applicant does not concede, the Examiner has nonetheless failed to establish *prima facie* obviousness.

Furthermore, Pavone does not teach or even suggest a cushion shaped to deform outwardly at a cutout portion in a sidewall along the heel section as required by Applicant's claim 22.

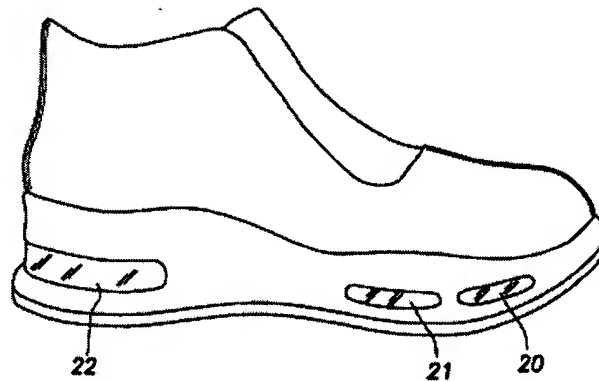


Fig. 7

Referring to Pavone's Fig. 1, reproduced above as Fig. 7, Pavone's shoe includes an opening 22. However, opening 22 merely provides for visibility of the helium modules. (Pavone, col. 1, lines 61-63). There is no teaching or suggestion of a cushion deforming outwardly through opening 22. Similarly, Fuerst fails to disclose a cutout in a sidewall. The only cutout that Fuerst describes is in the sole of the shoe. For this reason, in addition to those

reasons discussed above, Applicant respectfully requests that the rejection of claims 22 and 23 be withdrawn.

Pavone also fails to disclose a cushion comprising a polymeric, gelatinous material as required by Applicant's claims 27-29. Pavone uses helium chambers to provide a cushioning effect. Helium is clearly not a polymeric, gelatinous material. Similarly, as discussed above, Fuerst does not teach or suggest a polymeric, gelatinous material. For this reason, in addition to those reasons discussed above, Applicant respectfully requests that the rejection of claims 27-29 be withdrawn.

In view of the above remarks, Applicant respectfully requests that the Board reverse the rejections under 35 U.S.C. § 103.


**(8) Conclusion**

Applicant respectfully requests that all rejections be withdrawn.

A check in the amount of \$330 is enclosed in accordance with C.F.R. § 1.17(c) in payment of the Appeal Brief fee. Also enclosed is a Petition for Extension and payment of \$110 for the required fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 1-15-04

  
\_\_\_\_\_  
Michael R. Hamlin  
Reg. No. 54,149

Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110-2804  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906

### **Appendix of Pending Claims**

1. A shoe comprising:

an outsole having an upper surface, an opposite lower surface, and a heel section, the upper surface being positioned relatively closer to a wearer's foot and the lower surface being positioned to engage upon a floor or ground surface when the shoe is worn during walking, the outsole further defining an aperture in the heel section extending from the upper surface to the opposite lower surface; and

a resilient, deformable first cushion disposed in said aperture, with an upper cushion surface of said first cushion disposed at a region of the upper surface of the outsole in the heel section and a lower cushion surface of said first cushion exposed at a region of the lower surface of the outsole in the heel section,

said first cushion being adapted to deform and flow toward the floor or ground surface under the wearer's weight and force of heel strike, and

the outsole further comprising a recessed wall surface extending generally upwards from the lower surface toward the upper surface and defining a recessed region in communication, at its upper reaches, with said aperture, said lower cushion surface of said first cushion, exposed at the aperture within said recessed region, being spaced by said recessed wall surface of said outsole above the floor or ground surface at all times, including when said first cushion deforms and flows under the wearer's weight and force of heel strike.

2. The shoe according to claim 1 wherein the outsole comprises rubber.

3. The shoe according to claim 1 wherein the outsole comprises a thermoplastic resin.

4. The shoe according to claim 1 wherein the outsole is formed by molding.
5. The shoe according to claim 1 wherein the lower surface of the outsole has at least one groove formed therein to enhance the flexibility of the outsole.
6. The shoe according to claim 5 wherein the outsole has a width, and at least one of said at least one groove substantially traverses the width of the outsole.
7. The shoe according to claim 5 wherein the outsole has a perimeter, and at least one of said at least one groove has a closed-loop shape substantially parallel to the perimeter of the outsole.
8. The shoe according to claim 5 wherein the at least one groove has a substantially semi-circular shape.
9. The shoe according to claim 1 wherein the lower surface of the outsole has a grid pattern formed therein to enhance the flexibility of the outsole.
10. The shoe according to claim 1 or claim 9, wherein the upper surface of the outsole has a grid pattern formed therein to enhance the flexibility of the outsole.
11. The shoe according to claim 1 wherein the first cushion includes a protrusion that protrudes through the aperture.
12. The shoe according to claim 1 wherein the first cushion comprises a polymeric gelatinous material.
13. The shoe according to claim 1 or claim 12, wherein the first cushion further comprises a flexible, resilient sheet.
14. The shoe according to claim 13 wherein the sheet comprises polyurethane.



15. The shoe according to claim 1 wherein the upper surface of the outsole defines a recessed area for receiving the first cushion.

17. The shoe according to claim 1 wherein the outsole defines a plurality of apertures.

18. The shoe according to claim 1 wherein the outsole further comprises a sidewall along the heel section of the outsole, the sidewall including a cut-out portion.

19. The shoe according to claim 18 wherein the cut-out portion is a slot.

20. The shoe according to claim 18 further comprising a second cushion disposed in the outsole adjacent to the cut-out portion.

21. The shoe according to claim 20 wherein the second cushion deforms and flows outwardly at the cut-out portion during heel strike.

22. A shoe comprising:

an outsole having an upper surface, a lower surface, a heel section, and a sidewall along the heel section, the outsole further defining an aperture in the heel section extending from the upper surface to the lower surface and a cut-out portion in the sidewall;

a resilient, deformable first cushion disposed in said aperture, with an upper cushion surface of said first cushion disposed at a region of the upper surface of the outsole in the heel section and a lower cushion surface of said first cushion exposed at a region of the lower surface of the outsole in the heel section; and

a resilient, deformable second cushion disposed on the upper surface of the outsole in the heel section,

said first cushion being adapted to deform and flow toward the floor or ground surface under the wearer's weight and force of heel strike, and said second cushion being shaped to deform outwardly at the cut-out portion; and

the outsole further comprising a recessed wall surface extending generally upwards from the lower surface toward the upper surface and defining a recessed region in communication, at its upper reaches, with said aperture, said lower cushion surface of said first cushion, exposed at the aperture within said recessed region, being spaced by said recessed wall surface of said outsole above the floor or ground surface at all times, including when said first cushion deforms and flows under the wearer's weight and force of heel strike.

23. The shoe outsole according to claim 22 wherein the first cushion includes a protrusion that protrudes at the aperture.

26. A shoe comprising:

an outsole having an upper surface, an opposite lower surface, and a heel section, the upper surface being positioned relatively closer to a wearer's foot and the lower surface being positioned to engage upon a floor or ground surface when the shoe is worn during walking, the outsole further defining an aperture in the heel section extending from the upper surface to the opposite lower surface; and

a resilient, deformable first cushion disposed in said aperture, with an upper cushion surface of said first cushion disposed at a region of the upper surface of the outsole in the heel section and a lower cushion surface of said first cushion exposed at a region of the lower surface of the outsole in the heel section, the first cushion comprising a polymeric, gelatinous material;

said first cushion being adapted to deform and flow toward the floor or ground surface under the wearer's weight and force of heel strike;

the upper surface including a recessed region disposed around the aperture, for receiving the first cushion; and

the outsole further comprising a recessed wall surface extending generally upwards from the lower surface toward the upper surface and defining a recessed region in communication, at its upper reaches, with said aperture, said lower cushion surface of said first cushion, exposed at the aperture within said recessed region, being spaced by said recessed wall surface of said outsole above the floor or ground surface at all times, including when said first cushion deforms and flows under the wearer's weight and force of heel strike.

27. The shoe according to claim 26 wherein the outsole further comprises a sidewall along the heel section of the outsole, the sidewall including a cut-out portion.

28. The shoe according to claim 27 further comprising a second cushion disposed in the outsole adjacent to the cut-out portion.

29. The shoe according to claim 28 wherein the second cushion deforms and flows outwardly at the cut-out portion during heel strike.